IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEBRASKA

AUTOMATIC EQUIPMENT MANUFACTURING COMPANY, a Nebraska company;

Plaintiff/Counter-Defendant,

and

CREED–MONARCH, INC., A Connecticut Corporation;

Intervenor Plaintiff/ Counter-Defendant

vs.

DANKO MANUFACTURING, LLC, a Colorado limited liability company;

Defendant/Counter-Plaintiff.

8:19-CV-162

MEMORANDUM AND ORDER

I. INTRODUCTION

In this patent case, Defendant, the patent-holder, claims Plaintiffs infringed on its patent while Plaintiffs claim the patent was invalid because it was anticipated by earlier inventions. Following a trial in this matter, the jury returned a verdict in favor of Defendant, finding the patent was valid and Plaintiffs had infringed it. The jury awarded Defendant $2,417,500 in damages. The case now comes before the Court on Plaintiffs' post-verdict Renewed Motion for Judgment as a Matter of Law. Filing 148. For the reasons stated herein, the Court grants Plaintiffs' motion as to the jury's verdict of patent infringement and damages and denies Plaintiffs' motion as to invalidity of the patent.

II. BACKGROUND

The patent in suit is U.S. Patent No. 10,137,870 ("the '870 Patent") which was issued by the U.S. Patent and Trademark Office on November 27, 2018, and which is presently assigned to Defendant, Danko Manufacturing, LLC ("Danko"). Exhibit 1 at 2. The '870 Patent describes a brake-lock detection system. Exhibit 1 at 2. It is used when one vehicle is towing another, and the user wishes to employ both the towing and towed vehicles' brakes. Exhibit 1 at 11. To do so, the user installs an auxiliary brake-activation system in the towed vehicle which serves to activate the towed vehicle's brakes at the same time as the towing vehicle's brakes. Exhibit 1 at 11. The invention described in the '870 Patent "relates to . . . a structure and method for detecting when the brakes of a towed vehicle are locked by a brake activation system." Exhibit 1 at 11. Danko sells the RVi Brake 3 pursuant to the '870 Patent. Filing 143 at 40 (Danko company owner Jerad Burkhart testifying that "in 2016 we came out with the RVi Brake 3, and that's when we introduced a new and improved way of doing brake lock detection" as described in the '870 Patent).

Plaintiffs, Automatic Equipment Manufacturing Company doing business as Blue Ox, and Intervenor, Creed–Monarch, Inc. (jointly, "Blue Ox"),[1] also sell an auxiliary braking system, known as the Patriot 3. *See* Filing 144 at 15-17 (describing Patriot 3). Danko claims the Patriot 3 infringes Claim 1 of its '870 Patent and that Blue Ox infringed the patent willfully and induced others to infringe the patent as well. *See* Filing 145 at 11-12 (Danko's counsel limiting the question of infringement to Claim 1 only).

Claim 1 states as follows:

What is claimed is:

1. A brake controller comprising:
a main housing configured to engage an interior surface of a towed vehicle near a brake pedal of the towed vehicle;

[1] Plaintiff, Blue Ox, and Intervenor, Creed-Monarch, asserted the same interests throughout the trial and for purposes of the present motion.

> an actuation arm extending away from the main housing configured to connect to the brake pedal to actuate a brake of the towed vehicle through the brake pedal;
>
> an arm drive system of the main housing to apply a positive pressure to the actuation arm when activated to drive the brake pedal to actuate the brake;
>
> a negative pressure sensor to generate a negative pressure signal when the brake pedal applies a negative pressure to the actuation arm and the actuation arm is not activated.

Exhibit 1 at 17. Figure 4 of the ’870 Patent illustrates the invention:

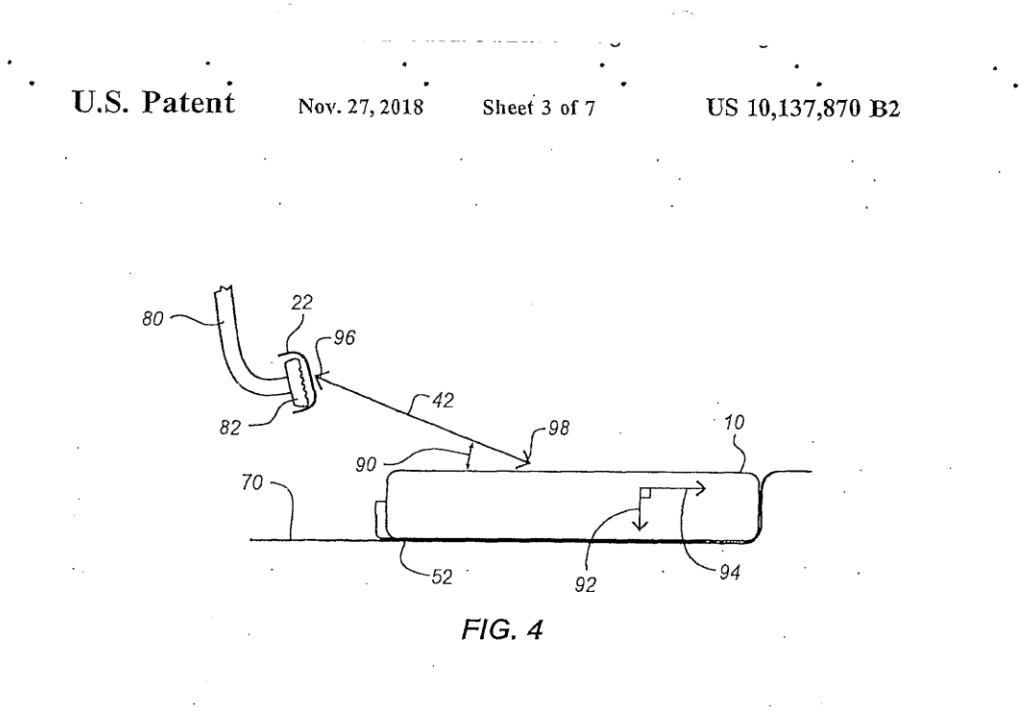


Exhibit 1 at 5.

Prior to trial, the parties agreed on the construction of several claim terms contained in the ’870 Patent, including the terms “negative pressure,” “negative pressure signal,” and “positive pressure.” Filing 43 at 2. The Court addressed the correct construction of claim terms which the parties disputed, including the term “negative pressure sensor.” Filing 53 at 14-15. These claim constructions were later used to instruct the jury. Filing 133 at 21 (jury instructions containing claim-term definitions).

Also prior to trial, the Court ruled on several motions in limine. In relevant part, the Court granted Blue Ox's motion in limine to prevent Danko's damages expert, Darrell Harris, from presenting testimony about supposedly comparable licensing agreements which he used to calculate a reasonable royalty as a form of damages. Filing 120 at 4-6. The Court determined Harris failed to "provide any details of the other licensing agreements by which a jury could assess their comparability to the royalty at issue in this case" and thus excluded his testimony and report in this regard. Filing 120 at 6.

The matter proceeded to a jury trial on September 14, 2021. At trial, the dispute centered solely around the fourth element of Claim 1 of the '870 Patent: the "negative pressure sensor to generate a negative pressure signal when the brake pedal applies a negative pressure to the actuation arm and the actuation arm is not activated." Exhibit 1 at 17. Danko argued that Blue Ox's Patriot 3 infringed the patented negative pressure sensor while Blue Ox argued it did not infringe and that prior art, namely the Skinner patent application (No. US 2008/0257656), Exhibit 19, embodied in a device known as Even Brake, Exhibit 51 (Even Brake instruction manual); Exhibit 52 (Even Brake device), anticipated the negative pressure sensor, thereby rendering the '870 Patent invalid.

Danko presented nine witnesses in support of its case for infringement. Jerad Burkhart and Daniel Decker, two of the owners of Danko, testified about the company's history and its development of its RVi Brake 3 product. Filing 143 at 34-78; Filing 144 at 61-74. Burkhardt testified that there are at least nine other auxiliary braking devices for towed vehicles on the market, including the Roadmaster InvisiBrake, Demco SMI Stay-IN-Play, Demco Delta Force, Demco SMI Air Force One, Roadmaster Even Brake, Roadmaster BrakeMaster, Brake Buddy 3,

and Blue Ox's devices, the Patriot 3 and its earlier model the Patriot 2. Filing 143 at 78-79, 89-91; Exhibit 182.

Danko also called a number of executives from the plaintiff companies, Blue Ox and Creed–Monarch, including Ronald Merchant, Michael Hesse, Nathan Mueller, Richard Creed, and Alex Walker. These witnesses generally testified about the cost and profit margin of each Patriot 3 devices, *see, e.g.*, Filing 144 at 124-25; Filing 144 at 136-38, as well as about having received a cease-and-desist letter from Danko in March 2019, *see, e.g.*, Filing 144 at 76-77. They also testified about having transitioned from selling the Patriot 2 to the Patriot 3 in 2019. Filing 144 at 139.

Only two of Danko's witnesses testified regarding how the Patriot 3 braking system works and whether it is similar to or dissimilar from the negative pressure sensor claimed in the '870 Patent: David Bailey, Blue Ox's expert, and Russell Creed, another executive of Creed–Monarch. Bailey testified that he is the president of dB Technologies, has extensive experience in intellectual property, and was hired by Blue Ox to author a technical report[2] regarding noninfringement. Filing 143 at 94-95, 96. He testified he was "thoroughly knowledgeable of the Patriot series of products" due to having worked closely with Creed–Monarch on their development. Filing 143 at 109-11. In Bailey's opinion, the Patriot 3 does not infringe the '870 Patent. Filing 144 at 6. With respect to the negative pressure sensor in the fourth subsection of Claim 1 of the '870 Patent, Bailey opined that the Patriot 3 does not infringe because it utilizes a force sense transducer, or load cell, rather than a negative pressure sensor. Filing 144 at 169-71.

On the stand, Bailey testified that the Patriot 3 did not infringe on the '870 Patent because the Patriot 3's transducer measured the positive force of the actuator rather than the negative pressure generated by the brake pedal. He explained,

[2] The parties stipulated to the admission at trial of this and other expert reports. Filing 143 at 31.

> [T]hat sensor [in the '870 Patent] generates a negative pressure signal and that negative pressure signal is a signal of whether the brake pedal is pressing -- the -- the force of the pressure from the brake pedal . . . . So that's – that's different than our transducer [in the Patriot 3] that's measuring the forces of the actuator that's generating a force.

Filing 144 at 22; *see also* Filing 144 at 26 ("[T]he Patriot 3 device does not have any construction of any ability or method to measure or sense the negative pressure or the -- from -- of the brake pedal, the brake pedal is exerting."); Filing 144 at 38-39 ("[T]he transducer in the Patriot does not have any -- any method or construction to give whether the brake pedal has been pressed or not. It doesn't give that state. It doesn't give that output, yes, it's pushed or, no, it's not. It has just a resistance of various -- has resistance when it's not pushed, has resistance when it is pushed, has resistance when it's stopped at full extension, has resistance -- that just -- that resistance value changes all along the way.").

Even when Danko's counsel repeatedly questioned whether the Patriot 3 was, in fact, measuring the negative pressure because it was the "opposite force" of the positive pressure of the actuator, Bailey testified that the Patriot 3 did not have a negative pressure sensor:

> Q. So you use the Patriot 3 sensor to detect the force, the -- the positive pressure in direction 96 [of figure 4], right?
>
> A. Yes.
>
> Q. And what you're not wanting to admit but you'll say and you've said many times, there's an equal and opposite force produced by the law of nature, right? You know that. You know that if you push on it with a certain force, you're going to get an equal and opposite force in -- in -- in -- in return. So that's what enabled Patriot 3 to do the negative pressure sensor improvement because you can -- you can program the thing. It's computer processor based, right? You can tell that actuator give me 37 pounds, can't you?
>
> A. Yes, sir.
>
> Q. And you -- and you shoot it out at 37 pounds and then you can read that equal and opposite force and see if it's enough or not, right? And you can -- you can adjust. If you need more, you can then shoot it up to 45 if you want, right?

> A. We don't -- we don't know that it's equal in all cases. I mean, we just know -- we measure the force of the actuator. This positive force of the actuator is what -- what we measure and bring back to the processor. We're assuming that, you know, it has the pedal.

Filing 144 at 33-34; *see also* Filing 144 at 36 ("Q. Oh, you say you're – you're not measuring the negative pressure, you're measuring the positive pressure. But how do you -- how do you measure the positive pressure without also creating the negative pressure? A. We don't create the negative pressure."); Filing 144 at 37 ("Q. Okay. Would you agree with me that -- I'll meet you halfway. Would you -- would you agree with this statement that -- okay. You don't have a -- you don't have a negative pressure sensor, but what you have is a positive pressure sensor that just inci- -- co- -- just coincident- -- just coincidentally also measures the negative pressure but that's not what you're intending to use it for. Is that your position? A. The position is that we have a sensor that absolutely reads the forces of the actuation arm.").

Bailey also explained that while the '870 Patent claimed a sensor that measured the negative pressure applied *by the brake*, the Patriot 3's load cell measured the positive pressure of the actuator regardless of whether it was pushing against the brake pedal or anything else. Filing 144 at 30-31 ("Q. . . . So, again, the question, the ultimate question on infringement becomes does the Patriot 3 sensor, is it capable of -- of measuring the pedal resistance? A. No. Q. Why not? A. The Patriot 3 force sense resistor transducer measures the force of the actuator. This actuator could be pushing on anything. Could be pushing on a brick wall, could be pushing on anything and it measures the force that the actuator has.").

Russell Creed, the project manager for Creed–Monarch, similarly testified that the Patriot 3's brake-lock detection functioned by means of measuring the positive force exerted by the actuator rather than the negative-pressure like the sensor contained in the '870 Patent. Filing 144

at 168. For example, when asked to describe the Patriot 3 "in the most general sense," Creed stated, "Our product tells whether or not the actuator's applying force on the brake pedal." Filing 144 at 172. He elaborated, "If our load cell detects that our actuator is applying positive force, it'll -- it'll send the -- the red and blue lights on the control panel." Filing 144 at 182. Danko's counsel asked him to clarify, "When you say 'positive force,' what do you mean by that?" Filing 144 at 182. Creed responded, "Force coming from the actuator." Filing 144 at 182. Like Bailey, Creed stood by his statement even as counsel pressed him on whether the Patriot 3's transducer also measured the negative pressure. *See, e.g.*, Filing 144 at 183 ("A. It's detecting positive force from the actuator. Q. Is it also detecting an equal and opposite -- I forget what you call it. Resistance, I'm sorry. Is it -- is it also detecting an -- a equal and opposite resistance force? A. It's measuring positive force of the actuator."); Filing 144 at 190-91 ("A. The load cell measures the amount of force applied by the actuator. Q. Okay. And so you're saying that equal and opposite force isn't taken into your consideration? A. I'm – I'm just telling you what the product does. Q. Doesn't it do both? I mean, if it -- if it's -- if it's applying a force, you call it in the positive direction, and it's creating a resistance, it's doing both, right? A. It's just measuring the force in the positive direction."); Filing 145 at 27 ("[W]e don't measure the resistance of the brake pedal. We measure the force of the actuator."); Filing 145 at 28 ("Q. Does the load cell measure the force of the brake pedal? A. No. Q. What does the load cell measure? A. The load cell measures the force of the actuator.").

Finally, Creed testified regarding a number of forms called Return to Manufacturer Authorizations ("RMAs") Blue Ox received which were the result of products returned to Blue Ox for a variety of reasons, such as "dragging brakes" when either user error or malfunction caused the towing car's brakes to be applied incorrectly. *See* Filing 144 at 176-207; Exhibit 306; Exhibit

307; Exhibit 308; Exhibit 309; Exhibit 310; Exhibit 311; Exhibit 312; Exhibit 313; Exhibit 314; Exhibit 315; Exhibit 316; Exhibit 317; Exhibit 318; Exhibit 319; Exhibit 320; Exhibit 321; Exhibit 322.

Lastly, Danko called its damages expert, Darrell Harris. He testified regarding his expert opinion on damages, although his damages report was offered only as a demonstrative exhibit, not as evidence. Filing 145 at 48. He testified that Blue Ox had sold 9,011 of the Patriot 3 units as of December 20, 2020. Filing 145 at 49-50. He also testified that it cost Danko $397.80 to produce "a unit," presumably in reference to its RVi Brake 3. Filing 145 at 51. He testified that each Patriot 3 unit retailed for $1,032, despite the figure $1,011 appearing as the retail price in some places on the demonstrative exhibit about which he was being questioned. Filing 145 at 52-53. Multiplying the higher unit price of $1,032 by the 9,011 units sold gave Harris total gross sales of the Patriot 3 of $9,299,352. Filing 145 at 52-53. He then testified to "costs" including "[m]aterials, $358," and "labor value of $39.80." Filing 145 at 53. He thus assessed the damages to Danko based on sales of the allegedly infringing Patriot 3 to be approximately $5.7 million once accounting for incremental profit as follows:

> Q. So, again, you multiply the 9,011 times that number and you get 3,584,575.80 and below that is a total lost incremental profit of $5,714,776.20. What is that number?
>
> A. That's the -- well, the incremental profit is the -- it is the amount after you subtract incremental cost from incremental revenues. . . . In other words, you've got lost revenues due to the alleged infringement, but there's a cost associated with that. For each additional unit that you manufacture, there's an increment of cost; and so had you sold the $9 million of additional units, you would have incurred three and a half million dollars of cost . . . -- so you wouldn't be entitled to $9 million as your -- your lost profits. You would be -- this is designed to put you in the place you would have been had you sold the $9 million of -- of units and incurred the additional cost.

Filing 145 at 54. On cross-examination, Harris admitted his $5.7 million lost-profits damages calculation was "limited to a single competitor, the Patriot 3," of the '870 Patent. Filing 145 at 70. He admitted his analysis did not consider any of the nine competing devices Burkhart had previously testified existed. Filing 145 at 70.

Harris testified that as an alternative to lost profits, a minimum amount of damages to be paid would be "[a] reasonable royalty" which he defined as "an amount if you were to license the product -- for -- for example, had Danko licensed Blue Ox . . . to sell the units instead of Danko doing it directly . . . they would charge them a fee for each unit they would sell." Filing 145 at 62-63. Danko's counsel asked Harris what the standard was for determining an appropriate royalty. Filing 145 at 63. Harris responded, "[W]e follow the 15 *Georgia-Pacific* factors." Filing 145 at 63. Danko's counsel interrupted to say, "And that'll be included in the jur -- in the jurors' instructions." Filing 145 at 63. Harris then explained that the two "general categories" of the *Georgia-Pacific* factors are "licensing activity . . . , there would be some history of what they were willing to accept as a reasonable royalty" and "financial factors, and those really require that each party in the transaction, having determined what a reasonable royalty is, is going to make a reasonable profit." Filing 145 at 64. Pursuant to the Court's ruling on Plaintiffs' Motion in Limine, Harris did not provide an opinion regarding what he thought would constitute a reasonable royalty in this case.

Following Harris's testimony, Danko rested its infringement case in chief. Filing 145 at 89. Blue Ox then made an oral motion for judgment as a matter of law under Federal Rule of Civil Procedure 50(a) as to "all of the infringement claims" including direct infringement, doctrine-of-equivalents infringement, induced infringement, and willful infringement, and the damages claim. Filing 145 at 97. The Court took the motion under advisement. Filing 145 at 102.

Blue Ox then presented the testimony of Robert Kneuper in rebuttal to Danko's infringement case. Kneuper, Blue Ox's damages expert, critiqued Harris's damages analysis for being "fundamentally flawed" and having "no factual support." Filing 145 at 111-12. Kneuper testified that for determining lost profits, it is important to assess whether the infringing feature is a driver of sales and whether any of the "gained sales would have come at the expense of other companies too," both of which Harris failed to do. Filing 145 at 114.

Blue Ox then presented its case in chief of invalidity for which it called one witness, Bailey, Blue Ox's expert who had previously been called by Danko in its infringement case in chief. Filing 145 at 170-71. Blue Ox's argument was that the '870 Patent had been anticipated by the Skinner patent application, Exhibit 19, embodied in Roadmaster's Even Brake device, Exhibit 52. The Skinner Patent application describes a brake monitoring system that includes "[a] method of monitoring a braking system comprising . . . sensing a parameter of the braking system in the towed vehicle" and transmitting such parameter to a receiver in the towing vehicle. Exhibit 19 at 32. One of the descriptions of the embodiments of the invention is:

> Operation detector 608 is configured to detect operation of the selected components of [auxiliary braking device] 20. If all selected components are properly operating, operation detector 608 communicates a signal to processor 604 indicating proper operation. If one or more of the selected components are not properly operating, a corresponding signal is communicated to processor 604.

Exhibit 19 at 25.

Bailey opined that Claim 1 of the '870 Patent was invalid by anticipation by the Skinner application embodied in the Even Brake device. Filing 145 at 180. Bailey demonstrated the operation of the Even Brake in court, including that it had a feature to detect if the brake pedal was depressed when the device was improperly installed. Filing 145 at 551-58; Exhibit 52; *see also*

Exhibit 246 (Bailey video demonstrating the same). With respect to the negative pressure sensor, Bailey testified Even Brake embodied this claim element as follows:

> Mr. Bailey, is the fourth element of Claim 1 disclosed by the EVEN BRAKE?
>
> A. Yes, it is.
>
> Q. And can you explain why?
>
> A. We have all of the elements up like on -- on the other terms. So we have a negative pressure sensor. We have a sensor that's reading if -- and a sensor that generates a negative pressure signal -- negative pressure signal onto these wires that if the brake pedal was putting a force back that -- okay -- negative pressure signal. When the brake -- . . . It generates a change of the state that's -- that -- of braking. Okay.
>
> BY [Blue Ox's counsel]:
> Q. And when you say it generates a state of braking, what do you mean?
>
> A. That there's a negative pressure. So it -- a change of state that a negative pressure of the -- of the brake pedal. So the brake pedal applies a negative pressure -- the brake pedal applies a negative pressure to the actuation arm. So right now this brake pedal is applying a force this direction -- right? -- the actuation arm is pushing it that way, and then last is when the actuation arm is not activated so this unit is not trying to brake, and all of those elements occurred in that last phrase.

Filing 145 at 192-93.

On the final morning of trial, the Court held a jury-instruction conference on the record. Filing 146 at 3. At the conference, Danko requested that the Court remove all references to the doctrine-of-equivalents theory of infringement, including in Preliminary Jury Instructions 19, 21, and 22 which had embodied the Model Patent Jury Instructions B.3.1a, B.3.1c, and B.2.d, respectively. Filing 146 at 15-17; Filing 150-2 at 1-2. Blue Ox did not object, and the Court removed the requested instructions. Filing 146 at 15-17. Thus, the jury was not instructed on the theory of infringement via the doctrine of equivalents.

Also at the jury-instruction conference, Blue Ox objected to the jury receiving any instructions on a reasonable royalty for damages. Filing 146 at 26-27. Blue Ox argued there had

not been "any testimony that would allow a jury to do anything other than speculate on royalties" and thus an instruction was inappropriate. Filing 146 at 27. Danko, however, insisted that the instruction should be given despite the lack of evidence submitted to the jury on the subject. Filing 146 at 27-28. The Court noted that the law allowed a jury to choose between awarding a reasonable royalty or lost-profit damages for each infringing sale. Filing 146 at 28. It thus determined it could not remove the reference to a reasonable royalty altogether because doing so would omit a legally available choice for the jury. Filing 146 at 28. It noted, however, that "if the jury would award something that was unreasonable [as a royalty based on the evidence or lack thereof], there could be a motion to me about it being unreasonable." Filing 146 at 28.

After the parties had rested, the Court instructed the jury. In relevant part, the instructions included definitions of certain terms in accordance with its previous claim-construction orders. *See* Filing 133 at 21-22 (jury instruction number 12 providing definitions of claim terms to the jury); Filing 43 (parties' agreed-upon claim term definitions); Filing 53 (Court's *Markman* order construing disputed claim terms). In particular, the Court instructed the jury that "negative pressure" meant "a force by the brake pedal in direction 98 in FIG. 4 [of the '870 Patent] opposing the positive pressure, indicating that the operational state of the braking system is 'brake.'" Filing 133 at 22. "Negative pressure signal" was defined as "a signal generated by changing the state of the negative pressure sensor" per the parties' agreement. Filing 133 at 22. The jury was instructed that "positive pressure" meant "a force by the actuation arm toward the brake pedal in direction 96 in FIG 4." The jury was not given a specific definition of "negative pressure sensor" as the Court had previously determined it should be afforded its ordinary meaning. Filing 53 at 14.

The jury was also instructed on the issue of damages. In accordance with its ruling at the jury-instruction conference, the Court instructed the jury on what a reasonable royalty was. *See*

Filing 133 at 38, 45-47. The instructions did not list the fifteen so-called *Georgia-Pacific* factors in full, but stated that two of the possible considerations in determining a reasonable royalty were "[t]he value that the claimed invention contributes to the accused product" and "[t]he value that factors other than the claimed invention contribute to the accused product." Filing 133 at 46.

The jury deliberated for a little more than five hours before returning a verdict in Danko's favor. Filing 139. Specifically, on the question of infringement, the jury found Danko had proven by a preponderance of the evidence that the Patriot 3 infringes the '870 Patent and that Blue Ox and Creed–Monarch willfully infringed the patent. Filing 139 at 1. With respect to invalidity, the jury found Blue Ox and Creed–Monarch had not proven by clear and convincing evidence that Claim 1 of the '870 Patent was anticipated. Filing 139. Finally, with respect to damages, the jury found Blue Ox and Creed–Monarch were obligated to pay Danko for post profits in the amount of $1,000,000 and $1,417,500 for a reasonable royalty. Filing 139 at 2-3.

Following the verdict, Blue Ox filed the present Renewed Motion for Judgment as a Matter of Law pursuant to Federal Rule of Civil Procedure 50(b). Filing 148. It moved in the alternative for a new trial. Filing 148 at 2.

III. ANALYSIS

A. Standard of Review

"The grant or denial of [judgment as a matter of law,] JMOL[,] is a procedural issue not unique to patent law; therefore, [the court] appl[ies] the law of the relevant regional circuit." *Synthes USA, LLC v. Spinal Kinetics, Inc.*, 734 F.3d 1332, 1340 (Fed. Cir. 2013) (citing *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1309 (Fed. Cir. 2009)). Under Eighth Circuit law, in deciding a motion for judgment as a matter of law, the court "view[s] the evidence most favorably to the nonmoving party and draw[s] all reasonable inferences in its favor." *Hinz v. Neuroscience,*

Inc., 538 F.3d 979, 984 (8th Cir. 2008) (citing *Liberty Mut. Fire Ins. Co. v. Scott*, 486 F.3d 418, 422 (8th Cir. 2007). "If the evidence viewed according to this standard would permit reasonable jurors to differ in the conclusions they draw, judgment as a matter of law cannot be granted." *Id.* (quoting *Liberty Mut.*, 486 F.3d at 422). "Judgment as a matter of law is appropriate when the record contains no proof beyond speculation to support a verdict." *Wash Sols., Inc. v. PDQ Mfg., Inc.*, 395 F.3d 888, 892 (8th Cir. 2005) (citing *Arabian Agric. Servs. v. Chief Indus.*, 309 F.3d 479, 482 (8th Cir. 2002)).

B. Infringement

Blue Ox first moves for judgment as a matter of law on infringement. Filing 149 at 3. It argues the record contains no proof to support the jury's verdict of direct infringement because there was no evidence the Patriot 3 infringed the negative-pressure-sensor element of Claim 1 of the '870 Patent. Filing 149 at 5-9. Blue Ox further argues that Danko abandoned its theory of infringement under the doctrine of equivalents, Filing 149 at 13, and that its findings of willful infringement and induced infringement lacked evidentiary support, Filing 149 at 16-17, 24-28. Danko counters that the Patriot 3's load cell must sense the negative pressure as well as the positive pressure and therefore the jury's finding of infringement should stand. Filing 155 at 3-22. Viewing the evidence in Danko's favor, the Court determines the record contains no proof beyond speculation to support a finding of infringement and therefore grants Blue Ox judgment as a matter of law on the question of infringement of the '870 Patent.

"Infringement, whether literal or under the doctrine of equivalents, is a question of fact." *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1129–30 (Fed. Cir. 2011). "The patentee has the burden of proving infringement by a preponderance of the evidence." *Centricut, LLC v. Esab Grp., Inc.*, 390 F.3d 1361, 1367 (Fed. Cir. 2004) (citing *Seal–Flex, Inc. v. Athletic*

Track and Ct. Constr., 172 F.3d 836, 842 (Fed. Cir. 1999)). The determination of infringement entails two steps: "first, the court construes the asserted claims as a matter of law to determine their meaning, and second, the trier of fact compares the properly construed claims to the accused product to determine whether it contains each limitation of the claims, either literally or under the doctrine of equivalents." *Ferguson Beauregard/Logic Controls, Div. of Dover Resources, Inc. v. Mega Sys., LLC*, 350 F.3d 1327, 1338 (Fed. Cir. 2003). Application of the claim to the accused device is a question of fact. *Crystal Semiconductor Corp. v. TriTech Microelectronics Intern., Inc.*, 246 F.3d 1336, 1345 (Fed. Cir. 2001). The infringement inquiry remains focused at all times on the claim language, as illuminated by the written description and the prosecution history. *Id.* at 1345–46.

The Court examines the questions of direct infringement, infringement via the doctrine of equivalents, induced infringement, and willful infringement in turn.

1. Direct Infringement

"To establish literal infringement, every limitation set forth in a claim must be found in an accused product, exactly." *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed. Cir. 1995) (citing *Becton Dickinson & Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 796, (Fed. Cir. 1990).

At trial, the evidence showed that the Patriot 3 meets the first three elements of Claim 1 of the '870 Patent, and thus, the question remaining for the jury was whether the Patriot 3 includes the fourth element of Claim 1, "a negative pressure sensor to generate a negative pressure signal when the brake pedal applies a negative pressure to the actuation arm and the actuation arm is not activated." Exhibit 1 at 17. Danko presented no evidence in support of its claim that the Patriot 3

includes the negative pressure sensor. Of the nine witnesses[3] it called in its case in chief for infringement, seven of them did not even discuss how the Patriot 3 functioned or operated. Burkhart and Decker, Danko's founders, were able to testify only about Danko and the RVi Brake 3 rather than the Patriot 3. *See* Filing 143 at 34-78; Filing 144 at 61-74. The employees of Blue Ox and Creed–Monarch that Danko did call (Merchant, Hesse, Mueller, Richard Creed, and Walker) testified about the costs of the Patriot 3 and about having received and addressed Danko's cease-and-desist letter rather than the technical aspects of the invention. *See* Filing 144 at 124-25; Filing 144 at 136-38; Filing 144 at 76-77. Only Russell Creed and Bailey (Blue Ox's expert called in Danko's case in chief) testified about how the Patriot 3 actually operates.

Both Creed and Bailey were consistent in their testimony that the Patriot 3's load cell, also known as its transducer, continually senses the amount of force the actuator arm is applying (e.g., the positive force being applied) as it operates. *See, e.g.*, Filing 144 at 22, 26, 33-35, 36, 37 (Bailey contrasting the '870 Patent's negative pressure sensor with Blue Ox's transducer); Filing 144 at 172, 182, 183 (Creed testifying to same); Filing 145 at 27, 28 (same). Danko's counsel repeatedly implied and attempted to have Creed and Bailey admit that the load cell must also sense the equal and opposite force of the actuator arm, i.e, the negative pressure. *See, e.g.*, Filing 144 at 33-34. But despite counsel's repeated questioning, Creed and Bailey remained steadfast in asserting that the Patriot 3 measures only the positive pressure of the actuator.

Bailey was also consistent in another aspect of his testimony that contradicts the jury's finding of infringement. He testified that the Patriot 3's load cell conducts continuous, ongoing

[3] Although Danko submitted numerous exhibits, none of them provide any insight into the issue of the load-cell-versus-negative-pressure-sensor argument. For example, Danko submitted hundreds of pages of RMA forms which showed when products (such as the Patriot 3) were returned to Blue Ox. *See* Filing 144 at 176-207; Exhibit 306; Exhibit 307; Exhibit 308; Exhibit 309; Exhibit 310; Exhibit 311; Exhibit 312; Exhibit 313; Exhibit 314; Exhibit 315; Exhibit 316; Exhibit 317; Exhibit 318; Exhibit 319; Exhibit 320; Exhibit 321; Exhibit 322.

monitoring of the force of the actuator. *See, e.g.*, Filing 144 at 38-39 ("[T]he transducer in the Patriot does not have any -- any method or construction to give whether the brake pedal has been pressed or not. It doesn't give that state. It doesn't give that output, yes, it's pushed or, no, it's not. It has just a resistance of various -- has resistance when it's not pushed, has resistance when it is pushed, has resistance when it's stopped at full extension, has resistance – that just -- *that resistance value changes all along the way*." (emphasis added)). The parties agreed and the jury was instructed that the term "negative pressure signal" in the '870 Patent means "a signal generated by *changing the state* of the negative pressure sensor." Filing 133 at 22 (emphasis added). In addition to the fact that Bailey consistently testified that the load cell was not configured to measure the negative pressure, he also testified that the load cell continuously measured the force of the actuator and was thus not dependent upon the "changing state" of the sensor to generate a signal like the '870 Patent was.

Thus, the only evidence presented at trial regarding the Patriot 3's brake-sensing technology was that it utilized a load cell or transducer to continuously measure the positive pressure the actuator applied. Although counsel repeatedly stated his belief that the load cell must also measure the opposite force (the negative pressure coming from the brake pedal) because of the "law[s] of nature," Filing 144 at 33, neither witness conceded this and counsel's questions are not evidence. *See Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017) ("Attorney argument is not evidence."); *see also* Filing 133 at 7 (jury instruction informing the jury that "[l]awyers' statements, arguments, questions, and comments are not evidence"). Because there was no evidence beyond speculation by which reasonable jurors could differ in the conclusion that the '870 Patent had not been literally infringed, Blue Ox is entitled to judgment as matter of law.

2. Infringement by the Doctrine of Equivalents

Blue Ox also argues that it is entitled to judgment as a matter of law on infringement under the doctrine of equivalents because Danko waived this argument. Filing 149 at 13-14. Danko does not dispute that it waived its doctrine-of-equivalents theory at trial. *See generally* Filing 155 (Danko's briefing failing to address Blue Ox's waiver argument). Blue Ox argues Danko nevertheless makes equivalency arguments in disguise, such as by asserting the Patriot 3 literally infringes because the "load cell, in conjunction with the computer processor . . . *would meet the Court's construction* of the negative pressure sensor." Filing 161 at 3 (emphasis added) (quoting Filing 155 at 13-14). To the extent Danko tries to assert the jury's verdict should stand under a doctrine-of-equivalents theory, the Court agrees with Blue Ox that it has waived such an argument.

"Under the doctrine of equivalents, 'a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is "equivalence" between the elements of the accused product or process and the claimed elements of the patented invention.'" *Bondyopadhyay v. United States*, 136 Fed. Cl. 114, 122–23, *aff'd*, 748 F. App'x 301 (Fed. Cir. 2018) (quoting *Warner–Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21, (1997)). "[T]o establish infringement under the doctrine of equivalents, the accused device must be shown to include an equivalent for each literally absent claim limitation." *Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1015 (Fed. Cir. 1998).

At set forth above, the Court's preliminary jury instructions contained a number of instructions regarding the doctrine of equivalents, which Danko itself requested the Court remove. Filing 146 at 15-17. This was in line with the evidence Danko presented at trial which focused exclusively on whether the Patriot 3's load cell was literally the same as the '870 Patent's negative pressure sensor. *See, e.g.*, Filing 144 at 30-37 (Danko's questioning of Bailey focusing on whether

the load cell measures negative pressure). In particular, there was no evidence or testimony regarding whether the load cell was merely substantially similar to the negative pressure sensor or whether it functioned in a similar manner and produced a similar result, which would have been necessary to support a doctrine-of-equivalents finding. *See Tech. Patents LLC v. T–Mobile (UK) Ltd.*, 700 F.3d 482, 500 (Fed. Cir. 2012) (describing the "insubstantial difference" test for doctrine-of-equivalents infringement); *Advanced Steel Recovery, LLC v. X-Body Equip., Inc.*, 808 F.3d 1313, 1319 (Fed. Cir. 2015) (describing the "function, way, result" test for doctrine-of-equivalents infringement). Blue Ox did not object, and the Court removed the requested instructions. Filing 146 at 15-17. Thus, the jury was not instructed on the doctrine of equivalents. In addition to the complete dearth of evidence to support an equivalency argument, the jury could not have determined that the Patriot 3 infringed the '870 Patent via a legal theory of which it was entirely unaware. Accordingly, Danko waived any argument for a finding of infringement by the doctrine of equivalents and Blue Ox is entitled to judgment as a matter of law.

3. Induced Infringement

Blue Ox also argues it is entitled to judgment as a matter of law regarding whether it induced infringement of the '870 Patent via its distributors and retailers. Filing 149 at 16-17. Danko argues that even after receiving its cease-and-desist letter, Blue Ox continued to provide Patriot 3 devices to be resold for a profit, thus knowingly inducing infringement of the '870 Patent. Filing 155 at 28-40. The Court concludes there is no evidence to support a finding of induced infringement.

Under 35 U.S.C. § 271(b), "[w]hoever actively induces infringement of a patent shall be liable as an infringer." Induced infringement "requires proof the defendant knew the acts were infringing." *Commil USA, LLC v. Cisco Sys., Inc.*, 575 U.S. 632, 642 (2015). "To prove

inducement of infringement, the patentee must []show that the accused inducer took an affirmative act to encourage infringement with the knowledge that the induced acts constitute patent infringement." *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 843 F.3d 1315, 1332 (Fed. Cir. 2016) (alteration in original) (quoting *Astornet Techs. Inc. v. BAE Sys., Inc.*, 802 F.3d 1271, 1279 (Fed. Cir. 2015)). "In other words, [the patentee is] required to prove that: (1) a third party directly infringed the asserted claims of the . . . patent[]; (2) [the alleged inducer] induced those infringing acts; and (3) [the alleged inducer] knew the acts it induced constituted infringement." *Id.*

Danko's argument for induced infringement fails before it starts because, for the reasons set forth above, there was no evidence to support a finding of direct infringement. *See ACCO Brands, Inc. v. ABA Locks Mfrs. Co.*, 501 F.3d 1307, 1312 (Fed. Cir. 2007) ("In order to prevail on an inducement claim, the patentee must establish 'first that there has been direct infringement, and second that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement.'" (quoting *Minn. Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1304–05 (Fed. Cir. 2002))). Without being able to demonstrate that the Patriot 3 infringed the '870 Patent, Danko could not have met the first element of showing "a third party directly infringed the asserted claim[]" by means of retailing the Patriot 3. *Power Integrations*, 843 F.3d at 1332. Blue Ox is entitled to judgment as a matter of law on Danko's claim of induced infringement of the '870 Patent.

4. Willful Infringement

Lastly as to infringement, Blue Ox argues there was no evidence to support the jury's finding of willful infringement. "[T]he concept of 'willfulness' requires a jury to find . . . deliberate or intentional infringement." *SRI Int'l, Inc. v. Cisco Sys., Inc.*, 14 F.4th 1323, 1330 (Fed. Cir. 2021)

(quoting *Eko Brands, LLC v. Adrian Rivera Maynez Enters., Inc.*, 946 F.3d 1367, 1378 (Fed. Cir. 2020)). Because the Court concludes there was no evidence of infringement to begin with (whether direct, equivalent, or induced), it agrees with Blue Ox that it is entitled to judgment as a matter of law on the question of willfulness.

In sum, there was no proof beyond speculation to support the jury's conclusion that the '870 Patent was willfully infringed by Blue Ox's Patriot 3. Additionally, Danko declined to submit the question of infringement under the doctrine of equivalents to the jury. Therefore, the Court must grant judgment as a matter of law to Blue Ox on the question of infringement.

C. Damages

Blue Ox next argues that, even if the jury was correct in finding it had infringed Danko's '870 Patent, Blue Ox is nevertheless entitled to judgment as matter of law on the question of damages. The Court agrees that there was no evidence beyond speculation to support the jury's damages findings and therefore grants judgment as a matter of law to Blue Ox on the issue of damages as well.

"The burden of proving damages falls on the patentee." *Dow Chem. Co. v. Mee Indus., Inc.*, 341 F.3d 1370, 1381 (Fed. Cir. 2003). "Two alternative categories of infringement compensation are the patentee's lost profits and the reasonable royalty he would have received through arms-length bargaining." *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009) (citing *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1157 (6th Cir. 1978)). The court addresses the lack of supporting evidence for these two categories of damages in turn.

1. Lost-Profit Damages

The jury awarded Danko $1,000,000 in lost-profit damages. Filing 139 at 2. Blue Ox argues this damages award was not supported by the evidence because Danko did not show that but for a sale of the Patriot 3, Danko would have made a sale of its RVi Brake 3. Filing 149 at 18. Danko argues that only the Patriot 3 contained the patented feature (the negative pressure sensor) and thus its expert, Harris, was correct to assume that all Patriot 3 sales would have gone to Danko. Filing 155 at 50-54. Plus, it argues that the jury must have determined Danko would only have garnered a portion of this market anyway because Harris opined that Danko suffered $5.7 million in lost-profit damages but the jury awarded only $1,000,000 in damages. Filing 155 at 54.

"Lost-profits damages are appropriate whenever there is a 'reasonable probability that, "but for" the infringement, [the patentee] would have made the sales that were made by the infringer.'" *Versata Software, Inc. v. SAP Am., Inc.*, 717 F.3d 1255, 1263–64 (Fed. Cir. 2013) (quoting *Rite–Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995)). "A showing under the four-factor *Panduit* test establishes the required causation." *Id.* at 1264 (citing *Rite–Hite*, 56 F.3d at 1545). "These factors include: '(1) demand for the patented product, (2) absence of acceptable noninfringing alternatives, (3) [capacity] to exploit the demand, and (4) the amount of profit [the patentee] would have made.'" *Id.* (alterations in original) (quoting *Panduit*, 575 F.2d at 1156).

There was no evidence to support Harris's position that all sales of the Patriot 3 would otherwise have gone to Danko as sales of its RVi Brake 3. Burkhart, one of the owners of Danko, testified that there were nine other competing auxiliary braking devices in the industry. Filing 143 at 78-79, 89-91; Exhibit 182. Harris admitted his analysis did not consider any of these nine competitors, but he did not provide any explanation for why the '870 Patent's negative pressure sensor would be the sole driving force behind sales and therefore the reason all Patriot 3 sales would go to Danko. Filing 145 at 70. In particular, Harris did not explain whether the other

competing devices contained brake-lock detection methods and how they differed from a negative-pressure sensor and whether a consumer who would otherwise buy a Patriot 3 might buy one of the competing devices rather than the RVi Brake 3. Without such evidence in the record, there is no basis for assuming that all Patriot 3 sales would otherwise have gone to Danko and that Harris's $5.7 million estimate is an accurate basis for calculating lost-profit damages.

Danko argues that because the jury reduced Harris's lost-profit figure to a round $1,000,000, the Court should presume this means it took Danko's competition into account and essentially "discounted" some of the lost profits. Filing 155 at 54-55. However, there was no reasonable basis for the jury to have arrived at a figure of $1,000,000, even assuming it was attempting to "discount" Harris's estimate to account for the nine competitors. Importantly, as set forth above, there was no evidence presented by which the jury could assess whether the RVi Brake 3's negative pressure sensor was a driver of sales and therefore whether a large portion of Patriot 3 sales would otherwise have gone to Danko or only a small portion. Furthermore, there was no evidence presented as to the manufacturing capacity or size of the nine competitors. Without any evidence as to the reason consumers might purchase the Patriot 3 over other devices and the market share of Danko's nine other competitors, any estimate by the jury of a damages award based on lost-profits was based on mere speculation and guess work. Accordingly, Blue Ox is entitled to judgment as a matter of law on the issue of lost-profit damages.

The situation is analogous to that in *Calico Brand, Inc. v. Ameritek Imports, Inc.*, 527 F. App'x 987, 997 (Fed. Cir. 2013), *decision clarified on reh'g*, 547 F. App'x 966 (Fed. Cir. 2013). In that case the United States Court of Appeals for the Federal Circuit reversed a jury award of lost-profit damages in part because the plaintiff had failed to show that it would have made sales but for the infringing product. *Id.* at 996-97. The Court stated, "Given the crowded nature of this

market [of twenty to thirty competitors], there is no reasonable basis to support an assumption that Calico would have made additional sales "but for" the presence of Ameritek lighters." *Id.* at 997. Likewise, here the evidence shows at least nine competitors existed for the RVi Brake 3 and there was no reasonable basis to support that but for the Patriot 3, Danko would have made a certain number of additional sales rather than its competitors. Because there was no evidence beyond mere speculation to support the jury's determination of lost-profit damages, Blue Ox is entitled to judgment as a matter of law on that issue.

2. Reasonable Royalty

The jury awarded $1,417,500 for damages based upon a reasonable royalty. Filing 139 at 3. Blue Ox argues there was a lack of evidence to support royalty damages. Filing 149 at 22-24. Danko argues that Harris's testimony about royalties and the jury instruction's reference to a reasonable royalty provide an adequate basis for the jury's award. Filing 155 at 55. The Court agrees with Blue Ox that there is a failure of proof to support the jury's reasonable-royalty damages award.

The most common approach to determining reasonable-royalty damages is "called the hypothetical negotiation or the 'willing licensor–willing licensee' approach, [and it] attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began." *Lucent Techs.*, 580 F.3d at 1324 (citing *Georgia–Pac. Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970)). The fact-finder considers a non-exhaustive list of fifteen factors in determining a reasonable royalty, the so-called *Georgia–Pacific* factors:

> 1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.

2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.

3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.

4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.

6. The effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.

7. The duration of the patent and the term of the license.

8. The established profitability of the product made under the patent; its commercial success; and its current popularity.

9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.

10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.

11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.

12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.

13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.

14. The opinion testimony of qualified experts.

15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount

> which a prudent licensee— who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention— would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

Georgia-Pac. Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified sub nom. Georgia-Pac. Corp. v. U.S. Plywood-Champion Papers, Inc.*, 446 F.2d 295 (2d Cir. 1971); *see also Lucent Techs.*, 580 F.3d at 1325 ("We review the [reasonable royalty] damages award within the *Georgia–Pacific* framework.").

Prior to trial, the Court granted Blue Ox's motion in limine preventing Danko's damages expert, Harris, from testifying regarding non-comparable licensing agreements as a basis for arriving at a reasonable royalty calculation. Filing 120 at 4-6. As a result, at trial Harris only testified generally about royalties and did not provide a number or any specifics about a potential reasonable royalty calculation in this case. Filing 145 at 62-64. At the jury-instruction conference during trial, Blue Ox objected to the jury receiving instructions on how to determine a reasonable royalty. Filing 146 at 26-27. The Court agreed that because of its motion-in-limine ruling, there was sparse evidence from which the jury could calculate a reasonable royalty, but ultimately concluded it had to instruct the jury because the law allowed the jury to award either lost-profit damages *or* a reasonable royalty for each given infringing sale. Filing 146 at 28. The Court noted, however that "if the jury would award something that was unreasonable [as a royalty based on the evidence or lack thereof], there could be a motion to me about it being unreasonable."[4] Filing 146 at 28. This is exactly what happened.

[4] Despite the Court's statement and recognition at the jury instruction conference that the reasonable royalty evidence provided at trial was limited, Danko was steadfast in its position that the Court should instruct the jury as to reasonable royalty anyway. Filing 146 at 27-28.

There was no evidence beyond mere speculation which would have permitted the jury to arrive at a damages calculation based on a reasonable royalty. The only testimony Harris was able to present on this issue was to note that reasonably-royalty damages were guided by "the 15 *Georgia-Pacific* factors" in the two general categories of past licensing activity and what would allow each side to make a reasonable profit. Filing 145 at 62-64. Neither Harris nor any other witness provided evidence regarding what Danko's past licensing activity was nor was Harris able to testify regarding what amount of a royalty would have allowed each side to make a reasonable profit. The Court did not provide the list of all fifteen *Georgia-Pacific* factors to the jury given the lack of evidence. *Cf. Ericsson, Inc. v. D-Link Sys.*, 773 F.3d 1201, 1231 (Fed. Cir. 2014) (stating that "the district court erred by instructing the jury on multiple *Georgia-Pacific* factors that are not relevant, or are misleading, on the record before it"). Thus, beyond the mere fact that reasonable-royalty damages exist under the law, the jury had no actual evidence by which it could calculate a reasonable royalty. Blue Ox is entitled to judgment as a matter of law on the question of damages based upon a reasonable royalty.

D. Invalidity

Turning to its case in chief, Blue Ox argues the jury incorrectly found the '870 Patent was valid over prior art, namely the Skinner patent application as embodied in the Even Brake device. Filing 149 at 28. Danko argues the jury's verdict that the '870 Patent is valid was supported by evidence in the record such that judgment as a matter of law is unwarranted. Filing 155 at 65-66. The Court finds there is conflicting evidence and thus the jury's verdict of validity must stand.

"A patent shall be presumed valid." 35 U.S.C. § 282. However, a patent is invalid if "the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention." 35

U.S.C. § 102(a)(1). Section 102 "may bar patentability by anticipation if the device used in public includes every limitation of the later claimed invention" *Zenith Elecs. Corp. v. PDI Commc'n Sys., Inc.*, 522 F.3d 1348, 1356 (Fed. Cir. 2008) (quoting *Netscape Commc'ns Corp. v. Konrad*, 295 F.3d 1315, 1321 (Fed. Cir. 2002)).

Blue Ox argues it proved by clear and convincing evidence that the Skinner patent application as embodied in Even Brake disclosed all of the elements of Claim 1 of the '870 Patent, thereby rendering it invalid by anticipation. Filing 149 at 28. Specifically, as to the negative pressure sensor, Blue Ox argues the following description from the Skinner patent application discloses the same claim element:

> Operation detector 608 is configured to detect operation of the selected components of [auxiliary braking device] 20. If all selected components are properly operating, operation detector 608 communicates a signal to processor 604 indicating proper operation. If one or more of the selected components are not properly operating, a corresponding signal is communicated to processor 604.

Exhibit 19 at 25. Blue Ox argues that this ability to detect the operation of component parts, when connected to the car's own brake light switch, creates a negative pressure sensor within the meaning of Claim 1 of the '870 Patent. Filing 149 at 33-35. Blue Ox argues this was supported by the demonstration Bailey performed in which, by installing the Even Brake incorrectly such that it was depressing the brake pedal even when not activated, the car's brake light switch was activated, thus indicating it was sensing the negative pressure. Exhibit 246; *see also* Filing 145 at 205 (Bailey testimony stating same).

Blue Ox's contention that the Even Brake discloses a negative pressure sensor is not supported by the evidence at trial. In particular, the Skinner patent application discloses only a general "operation detector" which detects whether components are operating properly. Exhibit 19 at 25. As shown in Bailey's demonstration, in the Even Brake, this detector is accomplished by

configuring the device to connect to the car's brake light switch. *See* Exhibit 246. When the brake light switch activates, the operation detector knows the brakes have been activated and can compare such information with the state of the auxiliary braking device in order to determine if the components are operating properly are not. Exhibit 246; Exhibit 19 at 25. Thus construing this evidence in Danko's favor, Even Brake does not sense negative pressure; it reads the signal from the car's brake light switch to determine whether the towing car's brakes have been applied or not. While Blue Ox attempted to argue that the car's brake light switch itself was therefore the negative pressure sensor rather than any physical component of the Even Brake, the jury apparently did not believe this interpretation. While a reasonable jury could have differed in its conclusion, this is not a basis for granting judgment as a matter of law. The jury's verdict finding the '870 Patent valid must stand, and Blue Ox's motion for judgment as a matter of law on the issue of patent invalidity is denied.

E. Alternative Motion for a New Trial

Federal Rule of Civil Procedure 50(b) allows a party seeking judgment as a matter of law to include an alternative request for new trial under Rule 59. Rule 50(c) states, "If the court grants a renewed motion for judgment as a matter of law, it must also conditionally rule on any motion for a new trial by determining whether a new trial should be granted if the judgment is later vacated or reversed." Fed. R. Civ. P. 50(c). Blue Ox moves for a new trial as an alternative to its motion for judgment as a matter of law, Filing 148 at 2, but advances no argument in support of its request, *see* Filing 149. Danko similarly does not address Blue Ox's new-trial request. *See* Filing 155.

"A district court should grant a motion for new trial based on the sufficiency of the evidence when 'the verdict is against the weight of the evidence and allowing it to stand would result in a miscarriage of justice.'" *Lonesome Dove Petroleum, Inc. v. Holt*, 889 F.3d 510, 516 (8th Cir. 2018)

(quoting *Bennett v. Riceland Foods, Inc.*, 721 F.3d 546, 553 (8th Cir. 2013)). "On a motion for new trial, the district court is entitled to interpret the evidence and judge the credibility of witnesses, but it may not usurp the role of the jury by granting a new trial simply because it believes other inferences and conclusions are more reasonable." *Van Steenburgh v. Rival Co.*, 171 F.3d 1155, 1160 (8th Cir. 1999) (citing *White v. Pence*, 961 F.2d 776, 780–81 (8th Cir. 1992)).

Here, the jury's verdict finding infringement and awarding $2,417,500 in damages is against the overwhelming weight of the evidence and allowing it to stand would result in a miscarriage of justice. As set forth above, there was no evidence to support a finding that the Patriot 3's load cell infringes the '870 Patent's negative pressure sensor; rather than sensing the change in negative pressure from the brake pedal, the only evidence at trial was that the load cell continuously measures the positive pressure applied by the actuator. Furthermore, there was no evidence to support a finding of infringement by the doctrine of equivalents (which was also waived), induced infringement, and willful infringement. As to damages, there was no evidence supporting that every sale of a Patriot 3 would otherwise have gone to Danko such as to support a finding of lost-profit damages. There was likewise no evidence of the amount Danko and Blue Ox would have agreed to as reasonable royalty to support a royalty damages award. Accordingly, the jury's verdict on infringement and damages is against the overwhelming weight of the evidence and entitles Blue Ox to a new trial on those issues should the Court's determination of judgment as a matter of law be reversed on appeal. As set forth above, the jury's verdict on the issue of patent invalidity is supported by evidence in the record and thus no new trial is warranted on that issue.

F. Request for Equitable Relief

Lastly, the Court addresses the issue of the equitable relief Blue Ox seeks. In its Amended Complaint, Blue Ox sought a declaratory judgment that the '870 Patent is invalid and a permanent injunction

> enjoining Defendant DANKO, its officers, agents, servants, employees, and attorneys, and those persons in active concert or participation with DANKO who receive actual notice thereof from initiating infringement litigation and from threatening Plaintiff BLUE OX, or any of Plaintiff BLUE OX's customers, dealers, agents, servants, or employees, or any prospective or present sellers, dealers or users of Plaintiff BLUE OX's towed vehicle braking system, with infringement litigation or charging any of them either verbally or in writing with infringement of U.S. Patent 10,137,870 . . . .

Filing 4 at 3.

As to the request for declaratory relief, because the jury found the '870 Patent was not invalid by anticipation and this aspect of the jury's verdict stands, the request to declare the '870 Patent invalid is denied.

As to Blue Ox's request for a permanent injunction, the patent statute authorizes the Court to "grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable." 35 U.S.C. § 283. Injunctions are generally granted in patent cases following a finding of infringement. *See, e.g.*, *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 842 F.2d 1275, 1281 (Fed. Cir. 1988) (noting that when requested, "injunctive relief against an adjudged infringer is usually granted"). Here the situation is the reverse with Blue Ox as the accused infringer requesting an injunction upon a judgment of non-infringement. As set forth in Federal Rule of Civil Procedure 65, an injunction must "state its terms specifically" and "describe in reasonable detail . . . the act or acts restrained or required." Fed. R. Civ. P. 65(d). "In accord with the policy of Rule 65(d), the Supreme Court has denounced broad injunctions . . . ." *Int'l Rectifier Corp. v. IXYS Corp.*, 383 F.3d 1312, 1316 (Fed. Cir. 2004). "In

the patent infringement context, [the Federal Circuit] court has rejected as overly broad a permanent injunction that simply prohibits future infringement of a patent." *Id.*

Blue Ox's requested injunction is likewise overly broad. Akin to the patent holder seeking to enjoin all future infringement, Blue Ox, as the accused infringer, seeks to enjoin all future infringement litigation relating to it, the '870 Patent, and all associated entities. This request is overly broad and exceeds the bounds of the judgment issued in this case which relates only to Claim 1 of the '870 Patent and which embodies only Blue Ox, Creed–Monarch, and the Patriot 3 device. The proposed injunction thus does not comport with Rule 65 or 35 U.S.C. § 283, and the Court denies the request for injunctive relief.

IV. CONCLUSION

Viewing the evidence most favorably to Danko, the Court concludes there is no proof beyond speculation to support the jury's verdict as to infringement and damages and thus grants Blue Ox judgment as a matter of law on these issues. The Court denies Blue Ox's motion for judgment as a matter of law as to the issue of invalidity.

Accordingly,

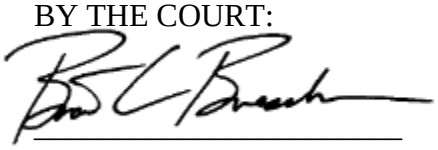
IT IS ORDERED:

1. Plaintiff's oral Motion for Judgment as a Matter of Law under Federal Rule of Civil Procedure 50(a) is denied as moot in light of the Court's ruling on Plaintiff's renewed motion;
2. Plaintiff's Renewed Motion for Judgment as a Matter of Law under Federal Rule of Civil Procedure 50(b), Filing 148, is granted in part and the jury's verdict is set aside as to the issues of patent infringement and damages;

3. Plaintiff's Renewed Motion for Judgment as a Matter of Law under Federal Rule of Civil Procedure 50(b), Filing 148, is denied in part as to the issue of patent invalidity, and the jury's verdict finding the patent valid stands;
4. Plaintiff's alternative request for a new trial is granted as to the issues of infringement and damages should the Court's Order be reversed or vacated on appeal; and
5. The Court will enter a separate judgment.

Dated this 31st day of January, 2022.

BY THE COURT:



Brian C. Buescher
United States District Judge